

AMENDMENTS TO THE CLAIMS

Please amend the claims as provided below.

1. (Previously presented) An integrated differential receiver for an input/output pad comprising:

a single gate oxide differential receiver that receives an input voltage; and
a switchable voltage supply circuit operatively coupled to the single gate oxide differential receiver, switchable through at least one control signal to select at least one differential receiver supply voltage for the single gate oxide differential receiver wherein at least one of the selected receiver supply voltages is higher than a maximum voltage level of the input voltage.

2. (Currently amended) The receiver of claim 1 wherein the switchable voltage supply circuit is coupled to at least an input/output pad supply voltage and selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage.

3. (Cancelled)

4. (Previously presented) The receiver of claim 1 wherein the differential receiver receives a first reference voltage on a first differential input and the input voltage on a second differential input and wherein the switchable voltage supply circuit selects the differential receiver supply voltage for the single gate oxide differential receiver to be a voltage level higher than the maximum voltage level of the input voltage.

5. (Cancelled)

6. (Original) The receiver of claim 1 wherein the switchable voltage supply circuit is operatively responsive to at least two control signals.

7. (Previously presented) The receiver of claim 1 wherein the single gate oxide differential receiver includes a transistor operatively coupled to an input transistor of a single

gate differential input stage having a gate coupled to a first reference voltage, a source coupled to the single gate oxide differential receiver supply voltage, a drain coupled to a drain of the input transistor that receives the input signal.

8. (Original) The receiver of claim 1 wherein the receiver generates an output signal to circuitry for a video graphics processor.

9. (Original) The receiver of claim 1 wherein the switchable voltage supply circuit includes a plurality of voltage switching circuits operative to alternately activate a common current source to selectively provide the differential receiver supply voltage for the single gate oxide differential receiver.

10. (Previously presented) An integrated differential receiver for an input/output pad comprising:

a single gate oxide differential receiver that receives a reference voltage on a first differential input and an input voltage on a second differential input;

a switchable voltage supply circuit operatively coupled to the single gate oxide differential receiver, switchable through at least one control signal to select a differential receiver supply voltage for the single gate oxide differential receiver wherein at least one of the selected receiver supply voltages is a voltage level higher than a maximum voltage level of the input voltage; and

an isolation output buffer operatively coupled to an output of the differential receiver and to core logic.

11. (Cancelled)

12. (Previously presented) The receiver of claim 20 wherein the switchable voltage supply circuit is operatively responsive to at least two control signals.

13. (Currently amended) The receiver of claim 20 wherein the single gate oxide differential receiver includes the single gate oxide differential receiver includes a transistor,

operatively coupled to an input transistor of a single gate differential input stage having a gate coupled to the reference voltage, a source coupled to the single gate oxide differential receiver supply voltage, and a drain coupled to a drain of the input transistor that receives the input signal.

14. (Previously presented) A method for controlling a voltage supply for a differential receiver comprising the steps of:

providing either of at least an I/O pad supply voltage or reference supply voltage for a single gate oxide differential receiver based on a control signal such that the reference supply voltage is selected as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be less than the second reference voltage, and

providing the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference voltage.

15. (Currently amended) The method of claim 14 including the step of buffering an output signal from the single gate oxide differential receiver prior to core circuitry receiving the output signal ~~being received by core circuitry~~.

16. (Original) The method of claim 14 including receiving a first reference voltage on a first differential input and an input voltage on a second differential input and selecting the differential receiver supply voltage for a single gate oxide differential receiver to be a voltage level higher than a maximum voltage level of the input voltage.

17. (Cancelled)

18. (Previously presented) The receiver of claim 1 including an isolation output buffer operatively coupled to an output of the differential receiver and that outputs a signal.

19. (Previously presented) The receiver of claim 1 wherein the switchable voltage supply circuit provides either of at least an I/O pad supply voltage or a reference supply voltage for the differential receiver based on the control signal such that the reference supply voltage is selected as the differential receiver supply voltage when the control signal indicates a maximum

input signal voltage to the single gate oxide differential receiver to be less than the reference supply voltage, and wherein the switchable voltage supply circuit provides the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage.

20. (Previously presented) The receiver of claim 10 wherein the switchable voltage supply circuit provides either of at least an I/O pad supply voltage or a reference supply voltage for the differential receiver based on the control signal such that the reference supply voltage is selected as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be less than the reference supply voltage, and wherein the switchable voltage supply circuit provides the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage.

21. (Previously presented) The method of claim 14 including providing at least one of an I/O pad supply voltage and a reference supply voltage for a differential receiver based on the control signal such that the reference supply voltage is selected as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be less than the second reference voltage, and providing the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage.

22. (Currently amended) An integrated differential receiver for an input/output pad comprising:

a single gate oxide differential receiver that receives an input voltage; and

a switchable voltage supply circuit ~~and~~ operatively coupled to the single gate oxide differential receiver,

wherein the switchable voltage supply circuit provides either of at least an I/O pad supply voltage or a reference supply voltage for the differential receiver based on the control signal such that the reference supply voltage is selected as a differential receiver supply voltage when the control signal indicates a maximum input signal voltage to the single gate oxide differential

receiver to be less than the reference supply voltage, and wherein the switchable voltage supply circuit provides the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage.

23. (Currently amended) The receiver of claim 2 wherein the single gate oxide differential receiver includes a transistor having a gate, a source and a drain such that at least one of: the gate to the source[,] and the gate to the drain cannot withstand the higher voltage than the I/O pad supply voltage.

24. (Currently amended) The receiver of claim 1 wherein the single gate oxide differential receiver includes an input transistor having a gate, a source and a drain wherein the gate receives an input voltage on a differential input[,] and the drain is coupled to the differential receiver supply voltage such that when the input voltage is at a maximum input voltage, the input transistor is off.